

REMARKS

Claims 1, 3-5 and 10-13 are pending in this application. An amendment is proposed herein amending claims 1, 3 and 4. Upon entry of this amendment, claims 1, 3-5 and 10-13 will be pending.

Claims 1, 3-5, 10-13 are rejected under 35 U.S.C. §102(b) as being anticipated by Linthicum, of record.

Reconsideration of the rejection is respectfully requested in view of the proposed amendments to the claims.

The Examiner states that at column 3, lines 59-62, Linthicum discloses a buffer layer of AlN or GaN, and that regardless of whether the buffer is GaN or AlN, there is a GaN layer grown on the SiC layer.

Linthicum, in column 3, lines 59-62, discloses a (111) silicon substrate, with a layer of 3C-silicon carbide epitaxially grown **on top of the surface**, and a layer of 2H-gallium nitride grown on the silicon carbide.

Claim 1 has been amended to recite that the silicon substrate is “formed by locally metamorphosing the monocrystalline silicon substrate into silicon carbide”. Support for this amendment to claim 1 may be found in the specification on page 5, lines 9-21.

That is, the silicon substrate is locally metamorphosed to silicon carbide actively and monocrystalline gallium nitride is grown on the region of silicon carbide. In other words, as shown in FIG. 1(E) of the present application, the region of silicon carbide is formed by actively

metamorphosing **a part of the surface** of the silicon substrate into silicon carbide, and in this regard the present invention clearly differs from the disclosure of Linthicum, in which the silicon carbide is epitaxially grown **on top of the surface**.

Moreover, compared with Linthicum's method, in which the silicon carbide is epitaxially grown on the silicon substrate, the present invention has an advantageous effect of obtaining monocrystalline gallium nitride of better quality.

With regard to claims 3 and 4, the Examiner states that:

"there are silicon nitride or silicon oxide layers alongside the silicon carbide layers in Linthicum. There is no recitation of direct contact between layers."

Although Applicant submits that claims 3 and 4 are not anticipated by Linthicum as a result of their dependence from claim 1, Applicant has amended claim 3 to replace the recitation of "alongside the region of silicon carbide," for clarity, with -- the region of silicon nitride positioned other than in said region of monocrystalline gallium nitride--. The corresponding amendment has also been made to claim 4.

Applicant therefore submits that claims 1, 3-5 and 10-13, as amended, are not anticipated by Linthicum.

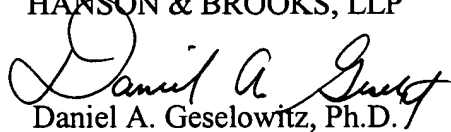
Entry of the amendments and reconsideration of the rejection are respectfully requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the Applicant's undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, KRATZ, QUINTOS,
HANSON & BROOKS, LLP



Daniel A. Geselowitz, Ph.D.

Agent for Applicants

Reg. No. 42,573

DAG/nrp
Atty. Docket No. 031258
Suite 1000
1725 K Street, N.W.
Washington, D.C. 20006
(202) 659-2930



23850

PATENT TRADEMARK OFFICE